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FRESH-WATER RHIZOPODS OF NANTUCKET

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DURING the spring of 1905 collections were made from the bodies of fresh water on the island of Nantucket, Mass., by several members of the Nantucket Maria Mitchell Association. This material was turned over to me for examination. A portion of it was made up of the sediment squeezed from submerged sphagnum. This, as was to be expected, seemed to be the richest in Rhizopods and contained many more species and individuals than the material from the bottom of the larger ponds. Certain species seem to be very limited in their distribution on the island, often occurring in but one of the collections out of the fifty or more examined. In such cases, however, there was usually an abundance of specimens of the species in that one collection. Other forms which were to be expected here were not met with at all. Of these *Hyalosphenia* was the most striking genus, as it usually occurs in just such material. Nearly all of the species found were of small size for their respective species and may be compared with the specimens noted by the writer and Mr. Henderson from the alpine region of the White Mountains (*Amer. Nat.*, vol. 39, March, 1905, p. 155). The cause of this minimum size in the case of the Nantucket specimens is hard to explain unless for some reason there is not sufficient nourishment for them, but this does not seem to be a reasonable explanation since the ponds are well supplied with minute algæ, especially desmids and diatoms. For certain of the records I am indebted to Mr. W. P. Henderson. The following species were found: —

1. ***Arcella vulgaris*** Ehrenberg. Breadth 52–55 μ ; height 21–23 μ ; aperture 12–14 μ .

Common. Hummock and Gibb's Ponds and from bog moss.

2. ***Arcella discoides*** Ehrenberg. Breadth 46–75 μ ; height 20–25 μ ; aperture 8–19 μ .

Common, but of small size. Hummock and Sesacha Ponds and from sphagnum in different parts of the island.

3. ***Centropyxis aculeata*** Stein. Breadth 65–72 μ ; height 30–38 μ ; aperture 11.5–18 μ .

Of small size. Common in Hummock Pond and in sphagnum swamps.

4. *Centropyxis aculeata ecornis* Ehrenberg. Length $94\ \mu$; breadth $78\ \mu$; aperture $26\ \mu$. From sphagnum.

5. *Quadrula symmetrica* Schul. Length $68\ \mu$; breadth $38\ \mu$; aperture $13.5\ \mu$.

This species occurred but once and then in considerable numbers. It was from bog moss material near the town. The specimens were very uniform in size and were small.

6. *Diffugia globosa* Dujardin. Diameter $58\text{--}65\ \mu$. Hummock Pond.

7. *Diffugia pyriformis* Perty. Length $90\text{--}102\ \mu$; breadth $45\text{--}54\ \mu$; aperture $21\text{--}24\ \mu$.

Small. Common in Gibb's and Wigwam Ponds and in sphagnum.

8. *Diffugia acuminata* Ehrenberg. Length $125\text{--}168\ \mu$; breadth $40\text{--}71\ \mu$; aperture $12\text{--}27\ \mu$.

Of small size. Wigwam Pond and from bog moss.

9. *Diffugia corona* Wallich. The only specimens referable to this species were from Wigwam Pond. These were of the usual shape but somewhat undersized and their shells instead of being composed of sand grains were almost entirely made up of diatom frustules. Diameter $112\text{--}132\ \mu$; aperture $50\ \mu$.

10. *Diffugia constricta* Ehrenberg. Length $60\text{--}87\ \mu$; breadth $36\text{--}46\ \mu$; aperture $18\ \mu$. Specimens of this species were found in but one lot of material and in this they were common. They were from bog moss near the town. The specimens were all undersized.

11. *Diffugia lobostoma* Leidy. Length $84\ \mu$; breadth $52\ \mu$; aperture $13\ \mu$. From sphagnum.

12. *Lecquereusia spiralis* Ehrenberg. Length $94\ \mu$; breadth $68\ \mu$; thickness $58\ \mu$.

This species was found in material from the north head of Hummock Pond only. The shells were composed of the peculiar pellets characteristic of this species. The specimens were small for the species.

13. *Euglypha alveolata* Dujardin. Length $90\ \mu$; breadth $75\ \mu$; aperture $23\ \mu$.

This species was met with but once, viz., in material from Wig-

wam Pond. The specimens of this species differ from those of most of the others in being of at least medium size for the species.

14. **Euglypha ciliata** Ehrenberg. Length 44–65 μ ; breadth, minimum 20–24 μ ; maximum 25–40 μ ; aperture, maximum 14.5 μ , minimum 10 μ .

This species may be called common. It was found in material from Hummock Pond and in various collections from bog moss. Unlike the preceding species of this genus the specimens as a rule were undersized.

15. **Assulina seminulum** Ehrenberg. Length 48 μ ; breadth 38 μ ; thickness 17 μ .

Specimens of this species were found in material from the south end of Hummock Pond. They were of small size.

16. **Heleopera sphagni** Leidy. Length 145 μ ; breadth, maximum 100 μ , minimum 48 μ .

This species was found only once but in that material it was common. It was from sphagnum near the north end of Hummock Pond. In size the specimens as a rule were above the average for the species, but were comparatively thin.

17. **Heleopera petricola** Leidy. Length 102 μ ; breadth 60 μ ; aperture 39 μ . From sphagnum.

18. **Nebela collaris** Ehrenberg. Length 81–150 μ ; breadth 58–76 μ ; aperture 16–23 μ . From sphagnum.

19. **Nebela caudata** Leidy. A single specimen of this rare species was obtained from sphagnum.

20. **Cyphoderia ampulla** Ehrenberg. Length 110–112 μ ; breadth 38–46 μ ; aperture 10–12 μ .

In a collection from bog moss near the town this species was abundant, but was not met with elsewhere on the island. The specimens were of very uniform size and small for the species.

21. **Trinema enchelys** Ehrenberg. Length 29–70 μ ; breadth 12–34 μ ; aperture 4–13 μ . From sphagnum.

22. **Acanthocystis spinifera** Greef. Diameter with spines 75 μ .

Specimens which seemed to be this species were found in material from Reedy Pond. They closely approximate the figures of a species of this genus figured by Leidy without a specific name.